

CURRICULUM VITAE

Name: Raffit Hassan

Education:

1980-1982 Pre-medical, Sri Partap College, University of Kashmir, India
1982-1988 M.B.B.S. (Bachelor of Medicine and Bachelor of Surgery),
 Government Medical College Srinagar, University of Kashmir,
 India

Chronology of Employment:

1988-1991	House Officer, Internal Medicine and Blood Banking, S.M.H.S. Hospital, University of Kashmir, India
1991-1994	Internship and Residency Internal Medicine, Sisters Hospital, State University of New York at Buffalo, NY
1994-1997	Fellowship, Medical Oncology and Hematology, National Cancer Institute (NCI), National Institutes of Health (NIH), Bethesda, MD
1997-1998	Bone Marrow Transplantation Fellowship, Georgetown University Medical Center, Washington, DC
1998-1998	Instructor in Medicine, Division of Hematology-Oncology, Lombardi Cancer Center, Georgetown University, Washington, DC
1998-2002	Assistant Professor of Medicine, Hematology/Oncology Section, University of Oklahoma Health Sciences Center, Oklahoma City, OK
2002-2009	Investigator, Laboratory of Molecular Biology, Center for Cancer Research (CCR), NCI, NIH, Bethesda, MD
2006-2013	Chief, Solid Tumor Immunotherapy Section, Laboratory of Molecular Biology, CCR, NCI, NIH
2009-2013	Senior Investigator, Laboratory of Molecular Biology, CCR, NCI, NIH
2013-present	Co-Chief, Thoracic and GI Oncology Branch, CCR, NCI, NIH
2013-present	Chief, Thoracic and Solid Tumor Immunotherapy Section, Thoracic and GI Oncology Branch, CCR, NCI, NIH

Medical Licensure:

Iowa State Licensure, 1992 (#28996 - inactive)
District of Columbia Licensure, 1997-present (#MD30378)
Oklahoma State Licensure, 1998 (#20929 - inactive)

Board Certification:

FLEX Certification, 1991
 Diplomat, American Board of Internal Medicine, 1994-2004
 Diplomat, Subspecialty of Medical Oncology, 1997-2017
 Diplomat, Subspecialty of Hematology, 1998-2008

Professional Organizations:

1992-1996 Associate, American College of Physicians
 1999-present Member, American Society of Clinical Oncology
 2002-present Member, American Association for Cancer Research

Scientific Committees:

2000-2002 Member, Gynecologic Oncology Group (GOG) Phase I Committee
 2005-2007 Member, Science Advisory Board, Mesothelioma Applied Research Foundation
 2006-2009 National Cancer Institute, CCR Grand Rounds Planning Committee
 2007-present Member, NCI Lung Cancer Program Group
 2008-2010 Chairman, Scientific Advisory Board, Mesothelioma Applied Research Foundation
 2009-2012 Member, American Society of Clinical Oncology (ASCO) – Scientific Program Committee (Lung Cancer –Metastatic)
 2010-present Member, Antibody Interest Group, National Cancer Institute, NIH
 2011-2014 Member, Scientific Advisory Board, Mesothelioma Applied Research Foundation
 2011-2014 Member, Department of Defense Peer Reviewed Cancer Research Program (PRCRP) Integration Panel

Editorial Boards:

Member, Editorial Board, *mAbs*

Scientific Journal Reviewer:

Cancer
Cancer Cell International
Cancer Detection and Prevention
Journal of Controlled Release
Leukemia and Lymphoma
Lung Cancer
Gynecologic Oncology
Journal of Histochemistry & Cytochemistry
Cancer Immunology Immunotherapy

American Journal of Clinical Oncology
Clinical Cancer Research
Molecular Cancer Therapeutics
Cancer Chemotherapy and Pharmacology
Journal of the National Cancer Institute
Journal of Clinical Oncology
Science Translational Medicine

Grant Reviewer and NIH Study Sections:

British Lung Cancer Foundation
NIH Oncological Sciences Fellowship Study Section
NIH Tumor Progression and Metastasis Study Section
NIH Oncology Signaling Section
Mesothelioma Applied Research Foundation
US Army Medical Research and Materiel Command (DOD)

Doctoral Thesis Examiner:

The University of Western Australia (2011)
Thesis title: The effect of chemotherapy on the anti-tumor immune response in patients with thoracic malignancies

Grant Support:

American Society of Clinical Oncology, Clinical Scientist Development Award,
Principal Investigator, 2001-2004
National Institutes of Health, K-23 (Mentored-Patient Oriented Research Career
Development Award), Principal Investigator, 2002-2007
NIH Office of Rare Disease, Funding to organize the First International Peritoneal
Mesothelioma Meeting, 2004
NIH Office of Rare Disease, Funding to organize the Second NIH Mesothelioma
Meeting, 2009

Honors and Awards:

Clinical Research Career Development Award, American Society of Clinical Oncology
(ASCO), 2001
National Institutes of Health K-23 Award (Mentored-Patient Oriented Research Career
Development Award), 2002
Federal Technology Transfer Award, National Cancer Institute, 2006, 2008, 2009, 2010
Pioneer Award, Mesothelioma Foundation (In Recognition of Contributions to
Mesothelioma Research), 2011
Research Highlights Award, NCI, 2014

Clinical Duties:

Ward attending on the medical oncology inpatient service
Medical oncology fellows teaching in outpatient clinic
Medical oncology fellows didactic teaching
Mentoring of inpatient nurse practitioners and students
Medical Oncology Branch scientific protocol review committee

Presentations at Scientific Meetings/Invited Speaker:

1. Pre-clinical studies of K1-LysPE38QQR an immunotoxin for the treatment of patients with ovarian cancer. SmithKline Beecham National Gynecologic Oncology Fellows Forum, San Diego, CA., 1998.
2. Cytotoxicity of K1-LysPE38QQR, an immunotoxin for the treatment of ovarian cancer and malignant mesotheliomas. Society for Biologic Therapy Meeting, Pasadena, CA., 1999.
3. Targeted therapy: closer to magic bullets? Department of Medicine Grand Rounds, University of Oklahoma, Oklahoma City, OK., 1999.
4. Breast cancer: prevention, diagnosis and treatments. American College of Physicians - American Society of Internal Medicine Oklahoma Chapter Scientific Meeting, Oklahoma City, OK., 1999.
5. Anti-mesothelin immunotoxin for ovarian cancer immunotherapy. Research Seminar Department of Medicine, University of Oklahoma, Oklahoma City, OK., 2000.
6. An immunotoxin for treating mesothelin expressing tumors. Speaker, Resident Project Day Presentation - Sisters of Charity Hospital, State University of New York at Buffalo, Buffalo, NY., 2000.
7. Tumor specific therapy of ovarian cancer using a recombinant anti-mesothelin immunotoxin: from the bench to bedside. Research Seminar Department of Medicine, University of Oklahoma, Oklahoma City, OK., 2001.
8. SS1(dsFv)PE38, a recombinant immunotoxin for targeted therapy of ovarian cancer and mesotheliomas. Mayo Clinic, Rochester, MN., 2001.
9. SS1(dsFv)-PE38 anti-mesothelin immunotoxin in advanced malignancies: phase I and pharmacokinetic study of alternate day infusion. American Society of Clinical Oncology 38th Annual Meeting, Orlando, Florida., 2002.
10. Targeted therapy of ovarian cancer using an immunotoxin. Government Medical College Srinagar, University of Kashmir, Kashmir, India., 2002.

11. Mesothelin. Helene Harris Memorial Trust 9th International Biennial Forum on Ovarian Cancer, Stratford-Upon –Avon, United Kingdom., 2003.
12. Mesothelin, a cell surface glycoprotein, as a target for tumor specific therapy of pancreatic cancer. American Society of Clinical Oncology 39th Annual Meeting, Chicago, Illinois, 2003.
13. Targeted therapy of mesothelin expressing malignancies. University of New Mexico – Cancer Research & Treatment Center, Albuquerque, NM., 2003.
14. Treatment of mesothelin-expressing malignancies using the anti-mesothelin immunotoxin SS1P. National Cancer Institute Combined Intramural Principal Investigators Retreat, Bethesda, MD., 2004.
15. Targeted therapy of mesothelin expressing mesotheliomas, ovarian cancer and pancreatic cancer: results of phase I study of SS1(dsFv)PE38. American Society of Clinical Oncology 40th Annual Meeting, New Orleans, Louisiana, 2004.
16. Targeting mesothelin for tumor specific therapy of mesotheliomas: results of phase I study of SS1(dsFv)PE38. VII Meeting of the International Mesothelioma Interest Group (I.M.I.G), Brescia, Italy., 2004.
17. Targeting mesothelin for cancer therapy. National Cancer Institute 12th SPORE Investigator's Workshop 2004, Baltimore, MD., 2004.
18. Peritoneal Mesothelioma. First International Mesothelioma Meeting, Las Vegas, NV., 2004.
19. Updated results of the phase I study of SS1(dsFv)PE38 for targeted therapy of mesothelin expressing cancers. 16th EORTC-NCI-AACR Symposium on Molecular Targets and Cancer Therapeutics, Geneva, Switzerland., 2004.
20. Serum mesothelin in pleural and peritoneal mesothelioma. Second International Mesothelioma Meeting, Las Vegas, NV., 2005.
21. Detection and quantitation of serum mesothelin, a tumor marker for patients with mesothelioma and ovarian cancer, AACR-NCI-EORTC International Conference: Molecular Targets and Cancer Therapeutics, Philadelphia, Pennsylvania, 2005.
22. Mesothelin: a target for therapy and as a tumor marker in mesothelioma. International Mesothelioma Symposium-Turkey (IMES-TR), Antalya, Turkey., 2005.
23. Antibody-based treatment for mesothelioma: clinical trials and laboratory studies. Mesotheliomas of the pericardium and tunica vaginalis. VIII Meeting of the International Mesothelioma Interest Group (I.M.I.G), Chicago, IL., 2006.

24. Antibody-based therapies targeting the tumor antigen mesothelin. 5th International Symposium on Targeted Anticancer Therapies, Amsterdam, Netherlands., 2007.
25. Phase I study of SS1P, a recombinant anti-mesothelin immunotoxin for targeted therapy of mesothelin expressing mesotheliomas, ovarian and pancreatic cancer. American Society of Clinical Oncology 43rd Annual Meeting, Chicago, Illinois, 2007.
26. New Research: Posters of Meso Foundation-Funded Research Projects. International Symposium on Malignant Mesothelioma, Washington D.C., 2007.
27. Mesothelin targeted immunotherapy for mesothelioma and other common cancers. Dept. of Medicine Grand Rounds University of Oklahoma, Oklahoma City, OK., 2008.
28. Clinical trials of anti-mesothelin antibodies for cancer therapy. BIT Life Sciences 1st Annual Protein and Peptide Conference, Shenzhen, China., 2008.
29. Mesothelin as a target for mesothelioma immunotherapy
IX International Mesothelioma Interest Group (IMIG) Meeting, Amsterdam, The Netherlands., 2008.
30. Immunotherapy for mesothelioma using anti-mesothelin monoclonal antibodies.
Department of Environmental Pathology & Laboratory Medicine, University of Vermont College of Medicine, Burlington, VT., 2009.
31. Mesothelin targeted immunotherapy in combination with chemotherapy for malignant mesothelioma. International Mesothelioma Program, Brigham and Women's Hospital, Harvard Medical School, Boston, MA., 2009.
32. Mesothelin: a tumor marker and target for cancer therapy. Speaker, Resident Project Day Presentation - Sisters of Charity Hospital, State University of New York at Buffalo, Buffalo, NY., 2009.
33. NCI intramural mesothelioma research: Chemo-immunotherapy for mesothelioma.
National Cancer Institute, Early Detection Research Network (EDRN) meeting, Bethesda, MD., 2009.
34. Targeted chemo-immunotherapy for malignant mesothelioma: results of phase I study of SS1P plus pemetrexed and cisplatin for frontline therapy. National Cancer Institute Combined Intramural Principal Investigators Retreat, Bethesda, MD., 2010.
35. Mesothelin targeted chemo-immunotherapy for treatment of malignant mesothelioma and lung adenocarcinoma. 8th International Symposium on Targeted Anticancer Therapies, Bethesda, MD., 2010.
36. Phase I clinical trial of anti-mesothelin immunotoxin SS1P in combination with pemetrexed and cisplatin for frontline therapy of advanced pleural mesothelioma. NCI

- CTEP Early Drug Development Meeting, National Institutes of Health, Bethesda, MD., 2010.
- 37. Novel chemotherapeutics agents, molecular markers and potentials for target therapies. The 5th Asian Pacific Organization for Cancer Prevention General Assembly Conference, Istanbul, Turkey, 2010.
 - 38. Optimizing care in advanced lung cancer. Annual meeting of the American Society of Clinical Oncology, Chicago, IL., 2010.
 - 39. The present state of trials using immunoconjugates targeting solid tumors and new strategies emerging from the lab. Annual meeting of the American Society of Clinical Oncology, Chicago, IL., 2010.
 - 40. Anti-mesothelin immunotoxin SS1P plus cisplatin and pemetrexed for first line treatment of mesothelioma. The X International Mesothelioma Interest Group (IMIG) Meeting, Kyoto, Japan, 2010.
 - 41. Novel targets for mesothelioma treatment. The X International Mesothelioma Interest Group (IMIG) Meeting, Kyoto, Japan, 2010.
 - 42. Chemoimmunotherapy: A light in the darkness? Annual meeting of the American Society of Clinical Oncology, Chicago, IL., 2011.
 - 43. Mesothelin as a Therapeutic Target for Malignant Mesothelioma. National Cancer Institute Grand Rounds, Bethesda, Maryland, 2011.
 - 44. Immunoconjugates for Targeted Therapy of Solid Tumors. International Congress on Molecular Targeting Therapy, Kibbutz Hagoshirim, Israel, 2012.
 - 45. Updated results of the Phase II clinical trial of the anti-mesothelin monoclonal antibody Amatuximab in combination with Pemetrexed and Cisplatin for front line therapy of pleural mesothelioma and correlation of clinical outcome with serum mesothelin, MPF and CA-125. The XI International Mesothelioma Interest Group Meeting, Boston, Massachusetts, 2012.
 - 46. The Clinician: new medical treatments for mesothelioma. Malignant Pleural Mesothelioma Meeting, Padua, Italy, 2012.
 - 47. Treatment of mesothelioma with immunotoxin SS1P. NIH Translational Symposium, Bethesda, 2013
 - 48. Anti-mesothelin agents for mesothelioma therapy. University of California Los Angles, Mesothelioma Symposium, Santa Monica, 2013.

49. Chemotherapy and targeted therapies for mesothelioma. Peritoneal mesothelioma Symposium, Baltimore, 2013.
50. Durable cancer regressions in mesothelioma with the anti-mesothelin immunotoxin SS1P and immune suppression, IASLC 15th World Conference on Lung Cancer, Sydney, Australia, 2013
51. Mesothelin targeted therapies- the NIH experience. The University of Pennsylvania Mesothelioma Symposium, Philadelphia, 2013
52. Mesothelin targeted immunotherapy for treating cancer. National Cancer Institute Research Highlights Presentation, Washington D.C., 2014.
53. Recombinant immunotoxin therapy of mesothelioma: from concept to clinical activity. Keynote Speaker, International Symposium on Malignant Mesothelioma, Washington D.C., 2014.
54. Anti-mesothelin immunotoxin therapy for malignant mesothelioma. Keynote Speaker, National Cancer Research Institute-Mesothelioma Workshop, London, U.K., 2014.
55. Anti-mesothelin immunotoxin therapy for mesothelin expressing cancers. Grand Rounds Speaker, Memorial Sloan Kettering Cancer Center, New York, 2014.

BIBLIOGRAPHY

1. Dukoff, R., Horak, I.D., Hassan, R., and Rosenstein, D.: Akathisia associated with prochlorperazine as an antiemetic. *Ann. Oncol.* 7: 103-104, 1996.
2. Sandor, V.A., Hassan, R., and Kohn, E.C.: Exacerbation of pseudogout by G-CSF. *Ann. Intern. Med.* 125: 781, 1996.
3. Hassan, R., Meehan, K.R., and Spitzer, G.: High dose paclitaxel regimens with or without stem cell support for ovarian cancer. *CME J. Gyn. Oncol.* 1: 67-72, 1998.
4. Hassan, R., Wu, C., Brechbiel, M.W., Margulies, I., Kreitman, R.J., and Pastan, I.: ¹¹¹Indium labeled monoclonal antibody K1: Biodistribution study in nude mice bearing a human epidermoid carcinoma xenograft expressing mesothelin. *Int. J. Cancer* 80: 559-563, 1999.
5. Hassan, R., Viner, J., Wang, Q.C., Margulies, I., Kreitman, R.J., and Pastan I.: Antitumor activity of K1-LysPE38QQR, an immunotoxin targeting mesothelin, a cell surface antigen overexpressed in ovarian cancer and malignant mesothelioma. *J. Immunother.* 23: 473-479, 2000.

6. Guruswamy, S., Lightfoot, S., Hassan, R., Berlin, K.D., Ivey, T., and Benbrook, D.M.: Retinoids reverse the cancerous phenotype and induce apoptosis in ovarian carcinoma organotypic culture. *J. Natl. Cancer Inst.* 93: 516-525, 2001.
7. Meehan, K.R., Wu, A., Hassan, R., Miao, Y., Chawla, J., Slack, R., Gehan, E., and Herscowitz, H.: Ex vivo cytokine activation of peripheral blood stem cells, a potential role for adoptive cellular immunotherapy. *J. Hematother. Stem Cell Res.* 10: 283-290, 2001.
8. Hassan, R., Lerner, M.R., Benbrook, D.M., Lightfoot, S.A., Brackett, D.J., Wang, Q.C., and Pastan, I.: Anti-tumor activity of SS(dsFv)PE38 and SS1(dsFv)PE38, recombinant antimesothelin immunotoxins against human gynecologic cancers grown in organotypic culture *in vitro*. *Clin. Cancer Res.* 8: 3520-3526, 2002.
9. Hassan, R., Williams-Gould, J., Watson, T., Pai-Scherf, L.H., and Pastan, I.: Pretreatment with rituximab does not inhibit the human immune response against the immunogenic protein, LMB-1. *Clin. Cancer Res.* 10: 16-18, 2004.
10. Hassan, R., Bera, T., and Pastan, I.: Mesothelin: a new target for immunotherapy. *Clin. Cancer Res.* 10: 3937-3942, 2004.
11. Li, Q., Verschraegen, C.F., Mendoza, J., and Hassan, R.: Cytotoxic activity of the recombinant anti-mesothelin immunotoxin, SS1(dsFv)PE38, towards tumor cell lines established from ascites of patients with peritoneal mesotheliomas. *Anticancer Res.* 24: 1327-1336, 2004.
12. Hassan, R., Gupta, M., Kern, W., and Ozer, H.: Acute myeloid leukemia following treatment with cladribine for hairy cell leukemia: a case report and review of the literature. *Leuk. Lymphoma* 45: 2149-2152, 2004.
13. Hassan, R., Bera, T., Ho, M., and Pastan, I.: Mesothelin: a new target for immunotherapy. *Clin. Cancer Res.* 10: 8751-8753, 2004.
14. Ho, M., Hassan, R., Zhang, J., Wang, Q.C., Onda, M., Bera, T., and Pastan, I.: Humoral immune response to mesothelin in mesothelioma and ovarian cancer patients. *Clin. Cancer Res.* 11: 3814-3820, 2005.
15. Sato, N., Hassan, R., Axworthy, D.B., Wong, K.J., Yu, S., Theodore, L.J., Lin, Y., Park, L., Brechbiel, M.W., Pastan, I., Paik, C.H., and Carrasquillo, J.A.: Pretargeted radioimmunotherapy of mesothelin-expressing cancer using a tetravalent single-chain Fv-streptavidin fusion protein. *J. Nucl. Med.* 46: 1201-1209, 2005.
16. Hassan, R., Kreitman, R.J., Pastan, I., and Willingham, M.C.: Localization of mesothelin in epithelial ovarian cancer. *Appl. Immunohistochem. Mol. Morphol.* 13: 243-247, 2005.
17. Onda, M., Willingham, M.C., Nagata, S., Bera, T.K., Beers, R., Ho, M., Hassan, R., Kreitman, R.J., and Pastan, I.: New monoclonal antibodies to mesothelin useful for

- immunohistochemistry, fluorescence-activated cell sorting, western blotting and ELISA. *Clin. Cancer Res.* 11: 5840-5846, 2005.
18. Yokokawa, J., Palena, C., Arlen, P., Hassan, R., Ho, M., Pastan, I., Schlom, J., and Tsang, K.Y.: Identification of novel human CTL epitopes and their agonist epitopes of mesothelin. *Clin. Cancer Res.* 11: 6342-6351, 2005.
 19. Antman, K., Hassan, R., Eisner, M., Ries, L.A.G., and Edwards, B.K.: Update on malignant mesothelioma. *Oncology* 19: 1301-1309, 2005.
 20. Hassan, R., Laszik, Z.G., Lerner, M., Raffeld, M., Postier, R., and Brackett, D.: Mesothelin is overexpressed in pancreaticobiliary adenocarcinomas but not in normal pancreas and chronic pancreatitis. *Am. J. Clin. Pathol.* 124: 838-845, 2005.
 21. Hassan, R. and Alexander, R.: Non-pleural mesotheliomas: mesothelioma of the peritoneum, tunica vaginalis and pericardium. *Hematol. Oncol. Clin. North Am.* 19: 1067-1087, 2005.
 22. Verschraegen, C.F., Key, C.R., and Hassan, R.: Clinical presentation and natural history of mesothelioma: abdominal. In Pass, H.I., Vogelzang, N.J., and Carbone, M. (Eds.): *Malignant Mesothelioma: Advances in Pathogenesis, Diagnosis and Translational Therapies*. New York, Springer, 2005, pp. 391-401.
 23. Hassan, R., Remaley, A.T., Sampson, M.L., Zhang, J., Cox, D.D., Pingpank, J., Alexander, R., Willingham, M., Pastan, I., and Onda, M.: Detection and quantitation of serum mesothelin, a tumor marker for patients with mesothelioma and ovarian cancer. *Clin. Cancer Res.* 12: 447-453, 2006.
 24. Hassan, R., Alexander, R., Antman, K., Boffetta, P., Churg, A., Colt, D., Hausner, P., Kennedy, R., Kindler, H., Metintas, M., Mutti, L., Onda, M., Pass, H., Premkumar, A., Roggil, V., Sterman, D., Sugarbaker, P., Taub, R., and Verschraegen, C.: Current treatment options and biology of peritoneal mesothelioma: meeting summary of the first NIH peritoneal mesothelioma conference. *Ann. Oncol.* 17: 1615-1619, 2006.
 25. Pastan, I., Hassan, R., FitzGerald, D.J., and Kreitman, R.J.: Immunotoxin therapy of cancer. *Nat. Rev. Cancer* 6: 559-565, 2006.
 26. Onda, M., Nagata, S., Ho, M., Bera, T.K., Hassan, R., Alexander, R.H., and Pastan, I.: Megakaryocyte potentiation factor cleaved from mesothelin precursor is a useful tumor marker in the serum of patients with mesothelioma. *Clin. Cancer Res.* 12: 4225-4231, 2006.
 27. Zhang, Y., Xiang, L., Hassan, R., Chang, P.H., Carrasquillo, J.A., Jang, B., Le, N., Ho, M., and Pastan, I.: Synergistic antitumor activity of taxol and immunotoxin SS1P in tumor-bearing mice. *Clin. Cancer Res.* 12: 4695-4701, 2006.

28. Hassan, R., Williams-Gould, J., Steinberg, S.M., Liewehr, D.J., Yokokawa, J., Tsang, K.Y., Surawski, R.J., Scott, T., and Camphausen, K.: Tumor-directed radiation and the immunotoxin SS1P in the treatment of mesothelin-expressing tumor xenografts. *Clin. Cancer Res.* 12: 4983-4987, 2006.
29. Ho, M., Onda, M., Wang, Q.-C., Hassan, R., and Pastan, I.: Mesothelin is shed from tumor cells. (Ltr to the editor) *Cancer Epidemiol. Biomarkers Prev.* 15: 1757, 2006.
30. Onda, M., Nagata, S., Fitzgerald, D.J., Beers, R., Fisher, R.J., Vincent, J.J., Lee, B., Nakamura, M., Hwang, J., Kreitman, R.J., Hassan, R., and Pastan, I.: Characterization of the B cell epitopes associated with a truncated form of pseudomonas exotoxin (PE38) used to make immunotoxins for the treatment of cancer patients. *J. Immunol.* 177: 8822-8834, 2006.
31. Pastan, I., Hassan, R., Fitzgerald, D.J., and Kreitman, R.J.: Immunotoxin treatment of cancer. *Annu. Rev. Med.* 58: 221-237, 2007.
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33. Ho, M., Bera, T.K., Willingham, M.C., Onda, M., Hassan, R., Fitzgerald, D.J., and Pastan, I.: Mesothelin expression in human lung cancer. *Clin. Cancer Res.* 13: 1571-1575, 2007.
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35. Hassan, R. and Pass, H.I.: Mesothelioma. Physicians Information and Education Resource, American College of Physicians (<http://pier.acponline.org>; July, 2007)
36. Hassan, R., Bullock, S., Premkumar, A., Kreitman, R.J., Kindler, H., Willingham, M., and Pastan, I.: Phase I study of SS1P, a recombinant anti-mesothelin immunotoxin given as a bolus intravenous infusion to patients with mesothelin expressing mesothelioma, ovarian and pancreatic cancer. *Clin. Cancer Res.* 13: 5144-5149, 2007.
37. Steinbach, D., Onda, M., Voigt, A., Dawczynski, K., Wittig, S., Hassan, R., Gruhn, B., and Pastan, I.: Mesothelin, a possible target for immunotherapy, is expressed in primary AML cells. *Eur. J. Haematol.* 79: 281-286, 2007.
38. Zhang, Y., Xiang, L., Hassan, R., and Pastan, I.: Immunotoxin and taxol synergy results from a decrease in the high shed mesothelin levels in the extra-cellular space of tumors. *Proc. Natl. Acad. Sci. USA* 104: 17099-17104, 2007.

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41. Hassan, R. and Ho, M.: Mesothelin targeted cancer immunotherapy. *Eur. J. Cancer* 44: 46-53, 2008.
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46. Hassan, R., Schweizer, C., Lu, K.F., Schuler, B., Remaley, A.T., Weil, S.C., and Pastan, I.: Inhibition of mesothelin-CA125 interaction in patients with mesothelioma by the anti-mesothelin monoclonal antibody MORAb-009: Implications for cancer therapy. *Lung Cancer* 68: 455-459, 2010.
47. Sarnovsky, R., Tendler, T., Makowski, M., Kiley, M., Antignani, A., Traini, R., Zhang, J., Hassan, R., and FitzGerald, D.J.: Initial characterization of an immunotoxin constructed from domains II and III of cholera exotoxin. *Cancer Immunol. Immunother.*, 59: 737-746, 2010.
48. Zhang, Y., Hansen, J.K., Xiang, L., Kawa, S., Onda, M., Ho, M., Hassan, R., and Pastan, I.: A flow cytometry method to quantitate internalized immunotoxins shows that taxol synergistically increases cellular immunotoxins uptake. *Cancer Res.*, 70: 1082-10899, 2010.

49. Hassan, R.: Immunoconjugates for targeted therapy of solid tumors, In Govindan, R. (Ed.) *American Society of Clinical Oncology, 2010 Educational Book, 46th Annual Meeting* Alexandria, VA, 2010, pp. 95-99.
50. Hassan, R., Cohen, S.J., Phillips, M., Pastan, I., Sharon, E., Kelly, R.J., Schweizer, C., Weil, S.C., and Laheru, D.: Phase I clinical trial of the chimeric anti-mesothelin monoclonal antibody MORAb-009 in patients with mesothelin expressing cancers. *Clin. Cancer Res.*, 16: 6132-6138, 2010.
51. Xiang, X., Phung, Y., Feng, M., Nagashima, K., Zhang, J., Broaddus, V.C., Hassan, R., Fitzgerald, D., and Ho, M.: The development and characterization of a human mesothelioma in vitro 3D model to investigate immunotoxin therapy. *PLoS One* 6: e14640, 2011.
52. Kelly RJ, Sharon E, Hassan R.: Chemotherapy and targeted therapies for unresectable malignant mesothelioma. *Lung Can.*, 73:256-263, 2011.
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